

103

THE VEGETABLE INK PRINTING ACT

Y 4. G 74/7: V 52

The Vegetable Ink Printing Act, 103...

HEARING

BEFORE THE

INFORMATION, JUSTICE, TRANSPORTATION,
AND AGRICULTURE SUBCOMMITTEE

OF THE

COMMITTEE ON

GOVERNMENT OPERATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

SECOND SESSION

ON

H.R. 1595

TO REQUIRE THAT ALL FEDERAL LITHOGRAPHIC PRINTING BE PER-
FORMED USING INK MADE FROM VEGETABLE OIL, AND FOR OTHER
PURPOSES

MAY 26, 1994

Printed for the use of the Committee on Government Operations



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THE VEGETABLE INK PRINTING ACT

THURSDAY, MAY 26, 1994

HOUSE OF REPRESENTATIVES,
INFORMATION, JUSTICE, TRANSPORTATION,
AND AGRICULTURE SUBCOMMITTEE
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 2247, Rayburn House Office Building, Hon. Gary A. Condit (chairman of the subcommittee) presiding.

Present: Representatives Gary A. Condit, Karen L. Thurman, and Ileana Ros-Lehtinen.

Also present: Representative Collin C. Peterson.

Staff present: Robert Gellman, chief counsel; Aurora Ogg, clerk; and Diane M. Major, minority professional staff, Committee on Government Operations.

OPENING STATEMENT OF CHAIRMAN CONDIT

Mr. CONDIT. We will begin the hearing and the other members will join us. They are casting their journal vote and they will be over shortly.

Today we are holding a hearing on the Vegetable Ink Printing Act of 1993. The purpose of the legislation is to require that vegetable ink be used in Federal printing. There are two similar bills, H.R. 1595 and S. 716, which have already passed the Senate.

Lithographic inks are used in over 95 percent of Federal printing of documents or publications. Increasing the use of vegetable ink may diminish reliance on nonrenewable sources, increase support for domestic agricultural products, and be environmentally friendly.

Today we are joined by Senator Paul Wellstone from the State of Minnesota; our colleague, Mr. Durbin, who is the principle sponsor of the House bill; and Mr. Collin Peterson, who will be here as well. We will also receive testimony from the Government Printing Office, the American Soybean Association, and the Iowa Soybean Association.

So without further delay, we will ask Senator Wellstone to make his comments. I know he has a busy schedule and they are debating the health care bill on the other side and he has some important amendments that he would like to be involved in.

So, Senator Wellstone, the floor is yours. Thank you for coming this morning and for your patience.

[The bill, H.R. 1595 follows:]

103D CONGRESS
1ST SESSION

H. R. 1595

To require that all Federal lithographic printing be performed using ink made from vegetable oil, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 1, 1993

Mr. DURBIN (for himself, Mr. LEACH, Mr. PENNY, and Mr. BEREUTER) introduced the following bill; which was referred jointly to the Committees on House Administration and Government Operations

A BILL

To require that all Federal lithographic printing be performed using ink made from vegetable oil, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Vegetable Ink Printing
5 Act of 1993”.

6 **SEC. 2. FINDINGS.**

7 The Congress finds that—

1 (1) more than 95 percent of Federal printing
2 involving documents or publications is performed
3 using lithographic inks;

4 (2) various types of oil, including petroleum and
5 vegetable oil, are used in lithographic ink;

6 (3) increasing the amount of vegetable oil used
7 in a lithographic ink would—

8 (A) help reduce the Nation's use of
9 nonrenewable energy resources;

10 (B) result in the use of products that are
11 less damaging to the environment;

12 (C) result in a reduction of volatile organic
13 compound emissions; and

14 (D) increase the use of renewable agricul-
15 tural products.

16 (4) the technology exists to use vegetable oil in
17 lithographic ink and, in some applications, to use
18 lithographic ink that uses no petroleum distillates in
19 the liquid portion of the ink;

20 (5) some lithographic inks have contained vege-
21 table oils for many years; other lithographic inks
22 have more recently begun to use vegetable oil;

23 (6) according to the Government Printing
24 Office, using vegetable-based ink appears to add lit-
25 tle if any additional cost to Government printing;

(7) use of vegetable-based ink in Federal Government printing should further develop—

(A) the commercial viability of vegetable-based ink, which could result in demand, for domestic use alone, for 2,500,000,000 pounds of vegetable crops or 500,000,000 pounds of vegetable oil; and

(B) a product that could help the United States retain or enlarge its share of the world market for vegetable ink.

SEC. 3. FEDERAL PRINTING REQUIREMENTS.

(a) DEFINITION.—In this section, “Federal agency” means—

(1) an executive department, military department, Government corporation, Government-controlled corporation, or other establishment in the executive branch of the Government (including the Executive Office of the President), or any independent regulatory agency; and

(2) an establishment or component of the legislative or judicial branch of the Government.

(b) VEGETABLE-BASED INKS.—

(1) IN GENERAL.—Notwithstanding any other law, beginning on the date that is 180 days after the date of enactment of this Act, all lithographic print-

ing performed or procured by a Federal agency that uses oil in its ink shall use the maximum amount of vegetable oil that is technologically feasible and results in printing costs that are cost-competitive with printing using petroleum-based inks.

(2) MINIMUM PERCENTAGES.—Except as provided in paragraph (3), in no event shall a Federal agency use any ink that contains less than the following percentages of vegetable oil in its ink used for lithographic printing:

(A) In the case of news inks, 40 percent.

(B) In the case of sheet-fed inks, 20 percent.

(C) In the case of forms inks, 20 percent.

(D) In the case of heat-set inks, 10 percent.

(3) SUSPENSION OF EFFECTIVENESS OF PARAGRAPH (2).—(A) At any time at which a Federal agency determines that the cost of printing with vegetable-based ink is significantly greater than the cost of printing with petroleum-based ink, the Federal agency may perform or procure lithographic printing using ink that contains less than the percentages of vegetable oil in its ink than those specified in paragraph (2) until such time as the cost of printing

1 with vegetable-based ink is not significantly greater
2 than the cost of printing with petroleum-based ink.

3 (B) A determination made under subparagraph
4 (A) shall be reviewed—

5 (i) at least once every quarter, for the per-
6 formance or procurement of printing of mate-
7 rials that are printed on a regular basis; and

8 (ii) prior to performing or procuring the
9 printing of particular material of significant
10 size that is printed once or is printed at inter-
11 vals of 6 months or more.

○

**STATEMENT OF HON. PAUL WELLSTONE, A SENATOR IN
CONGRESS FROM THE STATE OF MINNESOTA**

Mr. WELLSTONE. I first want to thank you, Mr. Chairman, Congressman Peterson and other colleagues, for inviting me here to talk about a bill which I care about fiercely. This bill does two very important things: It promotes the country's rural economy and protects our environment. These are important goals which are very important to me and, I think, all of us.

As many of you know, Senator Bond from Missouri and I drafted Senate bill 716, the Vegetable Ink Printing Act bill, and it passed the Senate without objection in November. It had very broad based support.

I would like to thank and congratulate my colleague, Mr. Durbin, for introducing this bill in the House last year and for working very hard on its progress and development.

Mr. Chairman, I really appreciate your interest and the committee's interest and I applaud your leadership in furthering this legislation. I think it is a very, very, important piece of legislation.

Mr. Chairman, last year when I became chairman of the Small Business Committee Subcommittee on Rural Economy and Family Farming, I pledged that I would not just be a chair of a subcommittee and do nothing but try to be very, very proactive. And I was especially interested in the increased utilization of traditional and new agricultural commodities; that is, a way which we could think about new and innovative uses for new and old crops.

I am convinced that American agricultural innovation is vital. It promotes sustainable development in rural America, it provides economic opportunities and good jobs, and it supports and protects our environment and our countryside.

And I think as we look to a future renewable energy base, agriculture is a key component. Many also share this vision and we see many signs that farmers and other agriculturists and rural entrepreneurs are beginning to respond to this challenge by presenting some new innovations.

Vegetable ink is one of these promising and innovative developments. Use of vegetable inks in printing accomplishes three goals: One, it provides another market for farmers' crops; two, it relies on a renewable and, thus, sustainable resource base; and, three, it is better for our environment. Vegetable ink, by all accounts, represents a cleaner technology than the petroleum-based products it is beginning to replace in the market place.

The increased demand for domestic vegetable oils as an ingredient of these inks encourages and facilitates further research into and development of more new uses for vegetable oils and other domestic farm products. Again, I highlight the importance of that. Farmers themselves have made a direct and serious investment in both the development and promotion of vegetable inks. This, I think, is very encouraging.

Mr. Chairman, requiring the Federal Government to use more vegetable-based ink in its printing operations will not, of course, save the American family farmer. No one pretends that it will do so. In many cases, these new use markets will be niche markets, but this is not a drawback.

As we all know, farmers are happy for all the new markets for their products that they can find, and new product sectors always have the potential to spin off other new products or to lead to other new technological innovations. And that is the way I view this piece of legislation.

Use of vegetable inks is another compelling way we can help our environment and it is a natural step toward widespread use of cleaner, greener products. Vegetable ink derived from renewable agricultural products will help reduce dangerous volatile organic compounds, the toxic VOC emissions. Vegetable ink usage will also facilitate paper recycling and may even reduce heavy metals content in the ink.

Requiring the Federal Government to use vegetable inks is an important step and an essential continuation of our goals to promote clean, green, and environmentally friendly business. This step is a very important step toward using taxpayer dollars in a conscientious way which would also send a signal to the marketplace that the Federal Government is willing to use its purchasing power to pursue goals that we all share, in this case, helping out rural America and the environment.

With the Vegetable Ink Act, we here in the Congress do not aim to begin a trend, and I want to emphasize this, of micromanaging the Federal Government procurement process. But this bill follows a simple principle: When the cost to the taxpayers is equal or comparable, then preference should be given to products and services that further other goals in addition to filling the immediate procurement need. We do that with buy America provisions and we do that with buy green guidelines.

Mr. Chairman, I know the testimony presented here this morning will support my belief that vegetable inks are practical and cost-competitive and that there is room for expanded use of vegetable inks in government printing. In fact, there seems to be growing enthusiasm in some agencies for using vegetable inks in their printing.

GPO has told us that increasing vegetable ink usage will have a negligible impact on the cost of their printing jobs and that the standards proposed in this bill would pose no serious practical difficulties. In fact, the Department of Agriculture has already begun to do what this bill would require. They announced last year that they would use vegetable-based ink for their in-house printing.

In drafting the Senate bill my staff, along with the staff from other offices on both the Senate and the House sides, has worked carefully not only with proponents of this policy but with the people that are affected by it, including the industries.

We worked with the Printing Industries of America and the National Association of Printing Ink Manufacturers, just to name two. Their contributions are reflected in the standards section of the bill, and both the printers and the ink manufacturers have expressed to me the workability of these standards. This is evidence that there were and are many printers and ink manufacturers who firmly supported what we did in the Senate and some who even felt that we did not go far enough.

Among others, the Senate bill was endorsed by the American Soybean Association, who I see are here today; Ralph Nader's pub-

lic government purchasing project; the Consumer Federation of America, a very interesting kind of a coalition; Communicating for Agriculture; and, the Minnesota Soybean Growers Association.

Mr. Chairman, I believe that with this bill we can take a step forward toward helping rural America and the environment and I thank you for the opportunity to talk about this subject today.

And I wanted to add that right now 26 States and one-third of U.S. newspapers use ink in their operations. If vegetable ink is technically feasible and cost-effective for the rest of the country, it ought to be for the Federal Government.

And I think we are now at that point. Things have really changed dramatically. Mr. Chairman, this is a great opportunity and I just cannot thank you enough for moving this forward. I think it is just the sort of good news that people in rural America are looking for and we should be creative and we should keep moving forward policies that really can help people. This bill is very much in that spirit.

[The prepared statement of Mr. Wellstone follows:]



U.S. SENATOR PAUL WELLSTONE
CHAIRMAN
RURAL ECONOMY AND FAMILY FARMING
U. S. SENATE SMALL BUSINESS SUBCOMMITTEE

CONTACT: Pamela McKinney (202) 224-5641

Statement of U.S. Senator Paul Wellstone (D-Minn.)
HR. 1595, the Vegetable Ink Printing Act of 1993
May 26, 1994

Mr. Chairman. Thank you for this opportunity to talk about a bill which promotes rural America's economy and also protects our environment. This piece of legislation and all of its objectives are very important to me. As many of you know, Senator Bond and I drafted S. 716, the Vegetable Ink Printing Act bill, which passed the Senate without objection last November.

First, I'd like to thank and congratulate my colleague Mr. Durbin for introducing this bill in the House last year, and for working hard on its progress and development.

And Mr. Chairman, I greatly appreciate your interest, and the Committee's interest, in this bill, and I applaud your leadership in supporting and furthering this very important and beneficial legislation.

Mr. Chairman, last year, when I became Chairman of the Senate Small Business Committee's Subcommittee on Rural Economy and Family Farming, I pledged I would pursue strategies aimed at revitalizing rural communities. One way to do this is through increased utilization of traditional and new agricultural commodities - that is, through new and innovative uses of old and new crops.

I am convinced that American agricultural innovation is vital. It promotes sustainable development in rural America, provides growing economic opportunities and good jobs, and just as important, protects our precious environment and countryside. Agriculture is and must be a key component of our present and future renewable resource base. Many also share this vision. We see many signs that farmers, other agriculturalists and rural entrepreneurs are beginning to respond to this challenge and are developing many of the innovations in this area.

Vegetable ink is one of these promising and innovative developments. Use of vegetable inks in printing accomplishes these goals: One, it provides another market for our farmer's crops. Two, it relies on a renewable, and thus sustainable, resource base. And three, it is better for our environment.

Vegetable ink, by all accounts, represents a cleaner technology than the petroleum based products it is beginning to replace in the marketplace. The increased demand for domestic vegetable oils as an ingredient of these inks encourages and facilitates further research into, and development of, more new uses for vegetable oils and other domestic farm products. Farmers themselves have made a direct and serious investment in both the development and promotion of vegetable inks. This is encouraging.

(Over)

Requiring the federal government to use more vegetable-based ink in its printing operations will not, of course, save the American family farmer. In many cases, these new use markets will be niche markets. But this is not a drawback. As we all know, our farmers are happy for all the new markets for their products they can find. New product sectors always have the potential to spin off other new products or to lead to other new technological innovations.

Use of vegetable inks is another compelling way we can help our environment, and is a natural step towards wide-spread usage of cleaner, greener products. Vegetable ink, derived from renewable agricultural products, will help reduce dangerous volatile organic compounds (VOCs) emissions. Vegetable ink usage will also facilitate paper recycling, and may even help reduce heavy-metals content in ink.

Requiring the federal government to use vegetable inks is an important step, and an essential continuation of our goals to promote clean, green, and environmentally friendly business. But this step, this very important step, toward using taxpayer dollars in a conscientious way would also send a signal to the marketplace: that the federal government is willing to use its purchasing power to pursue goals that we all share -- in this case helping out rural America and the environment.

With the Vegetable Ink Act, we here in Congress do not aim to begin a trend of micromanaging the federal government procurement process. But this bill follows a simple principle: when the cost to taxpayers is equal or comparable, then preference should be given to products and services that further other goals in addition to filling the immediate procurement need. We do that with "Buy America" provisions, and we do that with "Buy Green" guidelines.

Mr. Chairman, I know the testimony presented here this morning will support my belief both that vegetable inks are practical and cost-competitive, and that there is room for expanded use of vegetable inks in government printing. In fact, there seems to be growing enthusiasm in some agencies for using vegetable inks in their printing. GPO has told us that increasing vegetable ink usage will have negligible impact on the cost of their printing jobs and that the standards proposed in this bill would pose no serious practical difficulties. In fact, the Department of Agriculture has already begun to do what this bill would require: they announced earlier this year that they would use vegetable-based inks for their in-house printing.

In drafting the Senate bill, my staff, along with staff from other offices on both the Senate and House sides, worked carefully not only with proponents of this policy, but with people from the affected industries, as well. We worked with the Printing Industries of America (PIA) and the National Association of Printing Ink Manufacturers (NAPIM), just to name two. Their contributions are reflected in the standards section of the bill, and both the printers and the ink manufacturers have expressed to me the workability of those standards. This is evidence that there were and are many printers and ink manufacturers who firmly supported what we did in the Senate, and some who even felt we did not go far enough.

Among others, the Senate bill was endorsed by the American Soybean Association, who I see are here today, Ralph Nader's Public Government Purchasing Project, the Consumer Federation of America, Communicating for Agriculture and the Minnesota Soybean Growers Association.

Mr. Chairman, I believe with this bill we can take a step forward to help rural America and the environment. I thank you for this opportunity to appear and to discuss this subject with you.

Mr. CONDIT. Thank you, Senator Wellstone. We appreciate you being here and your leadership in this area. It is our full intentions to mark something up and we intend to mark a bill up when we come back from break. So we appreciate your being here. I know you have to leave.

Would anyone like to make a comment or question Senator Wellstone?

Mr. PETERSON. Mr. Chairman.

Mr. CONDIT. Mr. Peterson.

Mr. PETERSON. Well, I don't want to question him. I want to commend the Senator for the work that he has done and I want to thank you for letting me come back to the committee even though I am not officially a member any more. I am glad to be back and to be a cosponsor of this.

I also want to commend Representative Durbin for his work, and one of the reasons that I wanted to be here today is that I can finally, with the movement of this, and I commend your leadership, I can get my cousin off my back, who is the president of the Minnesota Soybean Growers Association. And he has been bugging the heck out of me about why this bill isn't moving.

So it is good news that we are going to have a hearing and move ahead. And this is, as the Senator said, just the right thing to do. And with what we are hearing, you know, every day from our friends down at appropriations and the budget committee that we are going to have less money for the farm bill, so these are the kind of things that we absolutely have to do to improve the situation for farmers. So thank you all for your leadership.

Mr. WELLSTONE. Thank you. I thank my colleague, and any way that we can work with you as you go through markup, we want to. I want to thank again you for your leadership here and I am very, very excited about what we are all doing.

Mr. PETERSON. Thank you.

Mr. CONDIT. Thank you, Senator. Mrs. Thurman, do you have any comments?

Mrs. THURMAN. I would say that I think this is an exciting piece of legislation as well, and I actually shared this with Representative Durbin when I signed onto his piece of legislation. There is a big promotional program in Florida that is doing very similar kinds of things like this, even to the point where they are using it in photography colors, which is just real exciting.

And I also like the idea of getting rid of some of the—it is a land-fill issue for some of us that the renewable part of it I think is just wonderful. And I think it puts some emphasis on agriculture to show the innovative opportunities that agriculture gives to this country, and so often we don't let people know just how good they are to this country in the kinds of things they provide us in scientific technology. So you're right on.

Mr. WELLSTONE. Thank you.

Mr. CONDIT. Mr. Durbin, we apologize to you. You were here earlier and we were all over casting our journal votes. We apologize to you. The floor is yours, sir.

STATEMENT OF HON. RICHARD J. DURBIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. DURBIN. No, I understand that completely. I was probably passing you in the elevator. But Senator Wellstone has really given my statement. I will submit it for the record and I won't repeat it because I know that time is precious.

Let me tell you, we have 51 sponsors of H.R. 1595, including the gentlelady from Florida, whom I am glad to count as one of the early supporters of this effort. And I want to give credit to Congressman Jim Leach from Iowa, who has been a cosponsor to this bill going back many Congresses now where we have tried to move it forward.

Let me tell you briefly why this makes sense. First, it is economically sensible. If we can find a way to use vegetable-based ink it is going to save us some environmental headaches down the line.

It is also going to increase demand for America's farm products, particularly soybeans. That, of course, will increase income and reduce the need for government help.

It is environmentally sensible as well. I think that has been shown over and over again because it is biodegradable.

The other thing I want to make clear is that we are not asking any government agency to use vegetable ink when it doesn't make sense from a cost viewpoint. There is a specific provision in the bill which says that we are asking the Federal agencies to use this ink, the maximum amount of vegetable ink technologically feasible that results in printing costs that are cost-competitive with printing using petroleum-based inks. So, we are not asking for special treatment. We are only asking for an opportunity to make certain that these vegetable inks are part of the solution to the problems that we face in the environment and, of course, in the farm bill.

We have heard testimony about the fact that some 51 Members are cosponsoring this legislation. We are also aware of the fact that GPO is testifying today. That is good news. I have scanned their testimony and I see, for instance, and this is of personal interest to us, the only reason why our Congressional Record is not using soy or vegetable ink at the moment is because, as GPO will testify, they are using printing presses that are ancient. As they move into the new type of printing presses, they will be able to consider this type of ink. I would sure like to see that day occur very quickly.

Secretary Mike Espy has already taken the lead, spending about \$26 million a year on USDA printing with this form of ink. Twenty-six States, including your State of California and my State of Illinois, have already moved in this direction. As Senator Wellstone said, if in the private sector, in effect, 3,000 different newspapers have made this decision that this is the right way to go, I think it is time for the Federal Government to join ranks with them.

I thank you for this hearing. I know you are busy, as I am, and it means a lot to me that you will consider marking up this bill very shortly. I would be happy to answer any questions.

[The prepared statement of Mr. Durbin follows:]

RICHARD J. DURBIN

24TH DISTRICT, ILLINOIS

AT LARGE WHIP



Congress of the United States

House of Representatives

Washington, DC 20515-1320

TESTIMONY OF

THE HONORABLE RICHARD J. DURBIN

SUBCOMMITTEE ON INFORMATION, JUSTICE, TRANSPORTATION AND AGRICULTURE

COMMITTEE ON GOVERNMENT OPERATIONS

THE VEGETABLE INK PRINTING ACT, H.R. 1595

Mr. Chairman, I would like to thank the Subcommittee for taking the time to hold this very important hearing today and for allowing me this opportunity to testify on the Vegetable Ink Printing Act, H.R. 1595.

I also wish to thank my colleague from Iowa, Representative Jim Leach, who I have worked with on this and similar legislation since the 102nd Congress. Fifty-one House Members have cosponsored this measure, including Representative Thurman, a Member of the Subcommittee, who has been a long time supporter of vegetable-based ink in Florida.

This legislation is very similar to the Senate measure introduced by Senators Bond and Wellstone, S. 716. As you know, S. 716 passed the Senate by unanimous consent last November. I come before the Subcommittee today, Mr. Chairman, to express my strong support for both measures and to encourage expeditious consideration of this important legislation.

As Chairman of the House Appropriations Subcommittee on Agriculture, my Subcommittee continues to support research on soybean/vegetable-based ink. The Subcommittee believes that the environmental benefits from using a readily degradable ink and the low-rub characteristics of vegetable ink make this research essential.

The Vegetable Ink Printing Act would set minimum percentages of vegetable oil that must be used in ink by Federal agencies and government subcontractors for lithographic printing. These minimum percentages were arrived at through extensive meetings with Federal agencies and representatives from both the printing and ink manufacturers industries. H.R. 1595 would set the percentages at 40 percent for news ink, 20 percent for sheet-fed ink, 20 percent for forms ink, and 10 percent for heat-set ink. These percentages are supported by the American Soybean Association and their state affiliates.

This legislation enjoys broad support. In addition to the American Soybean Association, other agricultural interests supporting the measure include the National Corn Growers Association, the Corn Refiners Association, Communicating for Agriculture, and other oilseed organizations. Consumer groups such as the Consumer Federation of America and Ralph Nader's Government Printing Project also support H.R. 1595.

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Mr. Chairman, I welcome Senator Wellstone's testimony this morning. He has been a vocal proponent of this legislation. Senator Wellstone will testify as to the importance of vegetable ink in promoting environmentally-friendly rural economic development strategies. Put simply, the promotion of vegetable ink for use by the Federal government will undoubtedly account for greater market potential for soybeans and other oilseeds as well as increased processing.

I was also happy to learn that the Government Printing Office (GPO) will offer testimony today. Last summer, GPO's Acting Public Printer testified that he could see no practical problems in implementing the measure and was prepared to support Congress in an effort to increase the utilization of vegetable ink in government printing.

Vegetable ink has already achieved some success in government printing. The Department of Agriculture (USDA) has begun to implement the bill's provisions for its own printing operations. Last August, Secretary Mike Espy announced that all USDA ordered printing -- about \$26 million annually -- would employ ink derived from agricultural products. The announcement expanded the use of vegetable-based ink to cover all USDA contract printing.

It may also interest the Subcommittee to know that vegetable-based inks have been used successfully by many state governments for years. At least 26 states, including my home state of Illinois, use vegetable-based ink for their printing. Mr. Chairman, as you are probably aware, vegetable-based inks are commonly used in your home state of California, by both public and private entities, because of their proven environmental benefits.

The Federal government would do well to follow the lead of a majority of the states and the more than 3,000 American newspapers that use vegetable ink, including three-fourths of all daily newspapers. The Los Angeles Times, Detroit Free Press, St. Petersburg Times, and USA Today have all recognized the importance of the promotion of environmentally sound vegetable ink, and I believe it is time for the Federal government to realize its responsibility.

Mr. Chairman, I would be happy to assist you and the Subcommittee in any way possible to advance this common sense approach to government printing. I thank you again for the opportunity to testify today.

Mr. CONDIT. Mr. Durbin, thank you very much. The Senate bill was amended to include other renewable resources besides vegetable oil. What is your opinion about that amendment? Do you have any problems with it?

Mr. DURBIN. I have no problem with that at all. I think we ought to really open this up. This is not an exclusive franchise. What we are talking about here is some new thinking and fresh thinking. I think vegetable inks will play an important part in this, but I am open to other suggestions of other products that might do the same job or do it as well.

Mr. CONDIT. Mr. Peterson, do you have any questions or comments?

Mr. PETERSON. I was just going to again commend Representative Durbin.

Mr. DURBIN. Is it your brother we are taking care of here?

Mr. PETERSON. Cousin.

Mr. DURBIN. Cousin, OK.

Mr. PETERSON. Second cousin.

Mr. DURBIN. Glad to take care of him. No grief at the family reunion this summer.

Mr. CONDIT. Mr. Durbin, thank you very much. We appreciate your leadership in this and we will be back with you next month.

OK, we will take the next panel of Mr. DiMario, Mr. Diedrich, and Ms. Patterson. If you would, we have a policy of swearing the witnesses in. I know that this is noncontroversial but if you don't mind standing so we can be consistent, I will swear you in.

[Witnesses sworn.]

Mr. CONDIT. Why don't we start with you, Mr. DiMario.

STATEMENT OF MICHAEL F. DIMARIO, PUBLIC PRINTER, GOVERNMENT PRINTING OFFICE, ACCOMPANIED BY GEORGE COLLINS, MANAGER, QUALITY CONTROL AND TECHNICAL DEVELOPMENT

Mr. DiMARIO. Yes, sir. Mr. Chairman and members of the subcommittee, I am pleased to be here to provide the views of the Government Printing Office on H.R. 1595, the Vegetable Ink Printing Act of 1993. With me in the audience is Mr. George Collins, manager of GPO's quality control and technical department, which is responsible for testing and manufacturing inks used by GPO.

In the interest of time, I will summarize my prepared statement, which I have submitted for the record. I testified on the Senate companion to H.R. 1595, S. 716, last year before the Senate Committee on Rules and Administration.

As I stated at that time, GPO has no objection to this legislation. GPO is required by title 44 of the United States Code to perform printing, binding, and distribution services for all branches of the Federal Government. We are the single largest provider of these services in the government today.

To perform this work, last year we used a total of 102.6 tons of ink for in-plant production. Private sector printers working under contract with GPO used an estimated 1,100 tons of various inks. Vegetable oil already is in about 22 percent of the ink we use for in-plant production. This includes linseed oil, which is in the var-

nishes of many inks. Soybean oil is in about 5 percent of the inks used for in-plant production.

At this time, there is no vegetable oil in the ink used to print the Congressional Record and the Federal Register due to the presses we have been using to print these products; however, we are in the process of acquiring new presses to replace that equipment and they will be able to use vegetable inks to print the Record and the Register. The first press is scheduled to be delivered this Saturday, with the second and third presses to be delivered in 3-month intervals thereafter.

As an aside, let me note that the timetable for the installation of the new presses may not meet the 180-day timetable to be established by H.R. 1595, so perhaps that language in section 3, paragraph (B)(1) could be changed.

There would be an increase in the amount of vegetable ink used by GPO as a result of H.R. 1595. For central office printing we project an increase of approximately 6 to 8 tons annually, based on the use of the heat-set inks. Unfortunately, developing a similar estimate for procured printing is virtually impossible because of the lack of data concerning the kinds of inks used by contractors.

Nevertheless, GPO will have no problem in accommodating the requirements of this bill in our printing procurement program where the vast majority of government printing is performed. We already have 29 term contracts in place that require the use of vegetable inks. We have found that most contractors are capable of using vegetable inks at no additional charge, and many commercial contractors are currently using such inks as their standard.

As H.R. 1595 states, the cost of ink typically is a small portion of the overall cost of a typical printing job. The primary cost components are labor, machine time, and paper. The cost of the ink used to print the Record and the Register is approximately one-tenth of 1 percent of the entire cost. Even in cases where the comparative cost per pound of some vegetable-based and petroleum-based inks may be substantial, the impact of that cost differential on the total cost of printing the job is not likely to be significant.

If this legislation is passed, the requirement to use vegetable inks in Federal printing would be made a specification of our printing contracts wherever it is "technologically feasible," as stated in section 3, paragraph (B)(1) of H.R. 1595.

Contractors would submit bids for that specification only. They would not be required to submit dual bids for petroleum and vegetable inks. This is the procedure that has been followed for insuring the use of recycled paper in procured printing and it has been highly successful in terms of achieving maximum coverage in recycled paper utilization.

We have reviewed the Treasury Department's concerns that an escape clause be provided from the requirements of H.R. 1595 regarding the post-printing antitampering security features of government checks and other documents. We support this request, which would also apply to the printing of U.S. passports that we perform for the State Department.

As to verification, my statement also notes that a reliable post-production test for vegetable ink is under development. While the test will show the presence of vegetable oil in the ink, work is still

underway to develop a reliable method for quantifying the percentage of vegetable ink present in the ink.

Thus, in the short term, verification may require additional government effort, and my statement details what some of those measures could be. We do not believe the cost of these measures would be significant, however.

There are two other issues worth mentioning. First, we do not think vegetable ink poses any problems for the archival preservation of important government documents, an issue of longstanding issue to the Congress. Second, as you know, a number of proposals are currently under review in Congress regarding the future of GPO as the results of the national performance review and the efforts of the joint committee on the organization of Congress. GPO is fully prepared to assist and cooperate with Congress in whatever disposition is made of this issue and we support and are working actively with the administration and Federal agencies to reduce costs and provide improved printing and related services.

However, this subcommittee should be aware that to the extent that government printing is decentralized and dispersed throughout the agencies, as a possible result of any of these measures, it will be extremely difficult for the government to ensure and enforce the objectives of vegetable ink utilization under H.R. 1595 and S. 716. GPO's current unified structure and mission can assure maximum possible coverage for the use of vegetable inks under this legislation, just as we have insured the use of recycled paper in government printing.

Mr. Chairman, we are fully prepared to support and assist Congress in increasing the use of vegetable inks in government printing. This concludes my prepared statement and I would be pleased to answer any questions the subcommittee may have.

[The prepared statement of Mr. DiMario follows:]



United States Government Printing Office
Washington, D.C. 20401

MICHAEL F. DiMARIO

PUBLIC PRINTER

**PREPARED STATEMENT ON H.R. 1595,
THE VEGETABLE INK PRINTING ACT OF 1993,
BEFORE THE
SUBCOMMITTEE ON INFORMATION, JUSTICE, TRANSPORTATION,
AND AGRICULTURE,
COMMITTEE ON GOVERNMENT OPERATIONS
HOUSE OF REPRESENTATIVES**

**THURSDAY, MAY 26, 1994
ROOM 2247, RAYBURN HOUSE OFFICE BUILDING
10 A.M.**

Mr. Chairman and Members of the Subcommittee, I am pleased to be here today to provide the views of the Government Printing Office (GPO) on H.R. 1595, the Vegetable Ink Printing Act of 1993. This bill would require all Federal lithographic printing to be performed using ink made from vegetable oil. I testified on the Senate companion to H.R. 1595--S. 716--last year. As I stated at that time, GPO has no objections to this legislation.

GPO Mission and Services. GPO is required by Title 44 of the U.S. Code to perform printing, binding, and distribution services for all branches of the Federal Government. We are the single largest provider of these services in the Government today.

GPO performs inplant production services at the Central Office plant in Washington, DC, and at 5 regional plants around the country. Virtually all Congressional printing is performed at the Central Office plant, including the *Congressional Record*. The plant also produces other major publications like the *Federal Register* and the *Budget of the U.S. Government*. A high profile Government publication printed in the field is the *Commerce Business Daily*, which is printed at the Chicago regional printing office.

However, about 75 percent of all the printing requisitioned from GPO is competitively procured from private sector printers through our Printing Procurement Program. The Program operates out of the Central Office and from 14 regional procurement offices and 6 satellite procurement offices nationwide. Approximately 10,000 private sector printers--about a quarter of the nation's printing industry establishments--participate in GPO's Printing Procurement Program, with about 3,500 printers working with GPO on a regular basis.

In fiscal 1993, GPO performed printing work valued at \$157.6 million in the Central Office plant. Congressional work represented \$80 million of this amount. Regional plant work was valued at \$7.3 million. At the same time, GPO procured \$530 million worth of printing for Federal agencies from commercial printers. The vast majority of all the printing produced or procured by GPO utilizes the lithographic process.

GPO Ink Consumption. To perform this work, in fiscal 1993 the Central Office plant used 44.1 tons of news ink (this ink is used exclusively to print the *Congressional Record* and the *Federal Register*). The plant also used 33.5 tons of heat-set and 25 tons of sheetfed inks, for a total inplant ink consumption of 102.6 tons. Private sector printers used an estimated 1,100 tons of various inks on work procured by GPO in fiscal 1993, based on general assumptions about the volume of paper consumed by procured printing. Information on the specific kinds of inks used by contractors is not available.

Approximately half of the ink used by the Central Office plant is manufactured by GPO itself. The remaining half is purchased. We also manufacture inks for use by

other Government printing entities, such as the Senate Service Department, which for the past few years we have been supplying with vegetable inks at the Department's specific request. We are currently supplying them with about 800 pounds of ink per month.

Currently, vegetable oil is in about 22 percent of the ink we use for inplant production, primarily in sheetfed inks. This includes linseed oil which is in the varnishes of many inks. Soybean oil is in about 5 percent of the inks used for inplant production, primarily in colored inks.

Congressional Record and Federal Register. There is no vegetable oil in the news ink currently used for the production of the *Congressional Record* and the *Federal Register*. In 1987, the House and Senate Appropriations Committees directed GPO to conduct an economic and technical feasibility study of printing the *Record* and the *Register* with soy oil-based inks. The tests were unsuccessful due to the incompatibility of the inks available at that time with GPO's aging web letterpresses used to print these products.

GPO is in the process of acquiring 3 new 64-page web offset presses to replace those letterpresses. These presses will be able to use vegetable inks in the production of the *Congressional Record* and the *Federal Register*. The first press is scheduled to be delivered later this week. The second and third presses will be delivered in 3-month intervals thereafter.

As an aside, the timetable for the installation of the new presses may not meet the 180-day timetable to be established by H.R. 1595. Perhaps the timetable language in section 3, paragraph (b)(1) could be altered where the production of the *Record* and the *Register* are concerned.

Vegetable Inks in Printing Procurement. GPO's Central Office Printing Procurement Program currently has 29 term contracts in place that require the use of vegetable inks. The Internal Revenue Service (IRS) is requiring the utilization of vegetable inks on all tax package programs. For fiscal 1993, GPO procured 307 tax package programs for the IRS worth \$39.5 million. As I reported to the Senate last year, a survey we conducted of the top five contractors on our two most-used multiple award general use contracts found that they were capable of using vegetable inks at no additional charge, and that many commercial contractors are currently using such inks as their standard.

Cost of Vegetable Ink. Section 2, paragraph 6 of H.R. 1595 notes that, "according to the Government Printing Office, using vegetable-based ink appears to add little if any additional cost to Government printing." This is because the cost of ink is such a small portion of the overall cost of a typical printing job (the primary components are labor, machine time, and paper). The cost of the ink used

to print the *Congressional Record* and the *Federal Register*, for example, is approximately one-tenth of one percent of the entire cost. We have also been able to modify printing contracts, at the request of the requisitioning agency, to require the use of vegetable ink at no increased cost. Even in cases where the comparative cost per pound of some vegetable-based and petroleum-based inks may be substantial, the impact of that cost differential on the total cost of printing the job is not likely to be significant.

It is important to note that GPO's Printing Procurement Program, where the majority of vegetable inks would be employed, would not conduct cost comparisons of petroleum inks and vegetable inks to determine contract awards. Instead, the requirement to use vegetable inks in Federal printing would be made a specification of printing contracts wherever "technologically feasible," as stated in section 3, paragraph (b)(1) of H.R. 1595. Contractors would submit bids for that specification only; they would not be required to submit dual bids for petroleum and vegetable inks. This is the procedure that has been followed for ensuring the use of recycled paper in procured printing, and it has been highly successful in terms of achieving maximum coverage in recycled paper utilization.

"Escape Clause." We have reviewed the Treasury Department's concerns that an "escape clause" be provided from the requirements of H.R. 1595 regarding the post-printing anti-tampering security features of Government checks and other documents, as stated in the letter to the Subcommittee dated April 25, 1994. The requirement to use the maximum amount of vegetable ink that is "technologically feasible" might be sufficient for this purpose, but we support the Treasury Department's request which would also apply to the printing of U.S. passports performed by GPO for the State Department.

Verification. Currently, a reliable post-production test for vegetable ink is under development. While the test will show the presence of vegetable oil in the ink, work is still under way to develop a reliable method for quantifying the percentage of vegetable oil present in the ink. Thus, in the short term verification may require additional Government effort and costs. We do not believe these costs would be significant, however.

The solution would be similar to what GPO has done to verify the use of the required fiber content in recycled paper, for which there also is no post-production test. For recycled paper, GPO requires documentation and conducts inspections of mills from whom contractors buy paper. For purposes of vegetable ink verification, documentation that the required ink has been acquired and will be used on procured work could be required to be made available for GPO's review. The Government could also conduct inspections of contractor ink supplies in cases where the size and importance of the job suggests the need for such inspection. In cases of complaints that contractors are not using vegetable inks, GPO would

investigate. The same investigative procedure is currently used for complaints about the failure to use recycled paper. While we cannot provide an estimate of the added costs for verification, on the whole the growing use of vegetable inks by commercial printers suggests that the need for, and cost of, verification would not be significant.

Increased Consumption of Vegetable Ink. There would be an increase in the amount of vegetable ink used by GPO as a result of this legislation. For Central Office printing, we project an increase of approximately 6-8 tons annually, based on the amount of heatset inks projected to be used and the legislation's requirement that a minimum of 10 percent of the heatset vehicle be vegetable oil. If GPO continued to use news inks in the amount currently consumed, the increase would be greater: on the order of 15-20 tons. However, the new web offset presses GPO is acquiring are heatset presses and will use heatset ink, where the minimum required percentage of vegetable oil will be less; also, GPO is likely to use less ink to print the *Congressional Record* and the *Federal Register* with the offset process than is currently used in the letterpress process. Developing a similar estimate for procured printing is virtually impossible because of the lack of data concerning the kinds of inks used by contractors.

Vegetable Ink and Document Preservation. As you know, ensuring the archival stability of Government documents with enduring research and educational value has been a concern in recent years. Where the archival stability of vegetable ink is concerned, we do not foresee a problem. Until the discovery of petroleum and petroleum products in the past century, all printing inks were vegetable-based and some of these have survived quite well. The real issue in the archival preservation of documents is the quality of paper used and storage conditions. GPO's view is that vegetable ink poses no problems for the archival preservation of important Government documents.

Vegetable Ink and Current Government Printing Proposals. As you also know, various proposals are currently under review in Congress regarding the future of GPO, as the result of the National Performance Review and the efforts of the Joint Committee on the Organization of Congress. GPO is fully prepared to assist and cooperate with Congress in whatever disposition is made of this issue, and we support and are working actively with the Administration and Federal agencies to reduce costs and provide improved printing and related services. However, to the extent that Government printing is decentralized and dispersed throughout the agencies as the possible result of any of these measures, it will be extremely difficult for the Government to ensure and enforce the objectives of vegetable ink utilization under H.R. 1595 and S. 716. GPO's current unified structure and mission can assure maximum possible coverage for the use of vegetable inks under this legislation, just as we have ensured the use of recycled paper in Government printing.

Mr. Chairman, once again GPO has no objections to this legislation. We are fully prepared to support and assist Congress in increasing the use of vegetable ink in Government printing. This concludes my prepared statement and I would be pleased to answer any questions the Subcommittee may have.

Mr. CONDIT. Thank you, Mr. DiMario. We will get back to you with some questions. We will take Mr. Diedrich. Is that correct, sir?

STATEMENT OF LARRY DIEDRICH, PRESIDENT, AMERICAN SOYBEAN ASSOCIATION, ELKTON, SD

Mr. DIEDRICH. That's fine. Good morning, Mr. Chairman and members of the committee. I thank you and commend you once again for taking this bill and having this hearing here today.

My name is Larry Diedrich and I am a soybean farmer from Elkton, SD, and president of the American Soybean Association. I am here today representing both the American Soybean Association and the National Corn Growers Association, who support H.R. 1595.

We believe that the Federal Government should be setting the standard for all printers by using vegetable oil ink for printing whenever it is cost-effective. Since soy ink is the leading source of vegetable ink, we believe that that increased use of vegetable ink will result in an increased use of our product.

I think it is interesting when we look at history of soybean ink vegetable oil ink, it was developed by the Newspaper Association of America in 1985, not in response to environmental concerns, not in response to rural development, promotion of ag products, but because of their concern during the petroleum shortages back in the 1970's that they needed to have some sort of alternative.

Since that time, of course, the benefits have changed and we have begun to recognize several benefits for the ag community and also the environment. It is interesting also that over 2,000 different vegetable oil formulations were considered and, after that consideration, soybean oil was chosen because it was the most effective and abundant of the vegetable oils.

It was first tested in the Cedar Rapids Gazette in Iowa in 1987. Since that time, as we have heard, over 3,000 newspapers are using soy ink or veg oil inks, along with numerous other printers and so on. So it has been very well accepted through the industry.

We are also very pleased that Secretary of Agriculture Mike Espy announced at our EXPO last July that USDA printings would be using soy ink or veg ink wherever possible.

The American Soybean Association has recognized the significance of this product being made from our commodity and had devoted countless farmer dollars in promotion and further development of this ink. In fact, in 1989, Monsanto Agriculture Co. developed a soy seal trademark to indicate the presence of soybean oil in various agriculture products and assigned ASA the right to this trademark.

ASA has been very successful in promoting and expanding the market for soy ink by allowing the use of the soy seal when the product is being used in printing and manufacturing. The use of the trademark has allowed publishers and printers to know when they are using a soy ink product and readers to know when they are reading materials printed with a soy ink.

And because of all the newspapers I receive at home and many of the bills that I receive, it gives me a little bit of good feeling about receiving the bills when the fact is that I have a recycled

symbol on one side of it and the soy ink symbol on the other. And both as a consumer and a producer, that gives me a very good feeling.

The soybean industry established the National Soy Ink Information Center, which Jo Patterson is the leader of, in Des Moines, IA, that serves as a coordinator of the soy ink activities, including research and market promotion.

The center has developed standards for the use of the seal by setting minimum requirements that are very close to the minimum levels set in your bill. These standards are reviewed periodically and can be changed by the approval of the ASA board of directors. The executive director of the soy ink center, as I indicated, will be commenting on this later.

I would now like to tell the committee some of the reasons ASA believes that the vegetable oil ink such as soy ink is in the right direction for the government to be going. We believe they are beneficial to printers and the readers. The fact that soy ink allows pigments to reach their fullest capability, which is an important characteristic in the growing trend toward the use of color newspapers. Because soy ink provides a more intense color, printers can use less and it goes further.

Another very popular characteristic is low rub. This factor is extremely important to readers who dislike the aftereffects of holding a newspaper printed with a conventional petroleum ink, which I am sure each of you have found out.

Soy ink has other favorable characteristics that are important to all citizens that have an interest in our environment. Unlike petroleum, soybeans are renewable and a plentiful source of oil. Although soy ink is not completely biodegradable because of the pigments and other chemicals used, in small quantities in ink it is friendlier to the environment than traditional inks. We believe that this is an important factor for the Federal Government to consider due to large volumes of printed paper it uses and recycles daily.

Top researchers in the Western Michigan University recognized, as the Nation's premiere education institute for paper manufacturing have found, that soy ink is easier to remove from paper pulp before recycling. This paper does not have to be bleached as much, resulting in a cleaner paper at a lesser cost. This not only speeds up the recycling process, but contributes to a better quality recycled paper as a result.

Another key factor in favor of the soy inks, as indicated earlier, is the reduction in VOCs. Mr. Chairman, we are aware that the U.S. Treasury Department has brought an issue to the committee's attention regarding the use of the vegetable oil inks in security documents such as checks. We want the committee to know that we have no problem with such documents being exempt from the requirements of legislation as long as we have flexibility later on to address that issue.

Mr. Chairman, as a soybean farmer, I am proud of the commodity that I grow because it is used in so many different things, including making safer and cleaner inks. I hope that you and this committee will look at the legislation closely and endorse its purpose in instructing Federal agencies to use vegetable oil ink when it is available and cost-effective.

I think soybean ink is just one of the many products where we see agriculture and the environment working together and, to me, that gives me very much pride as a farmer and all the more reason to move forward with this legislation.

I thank you very much for your attention today and appreciate all that you can do. Thank you very much.

[The prepared statement of Mr. Diedrich follows:]



AMERICAN SOYBEAN ASSOCIATION
STATEMENT BEFORE THE
HOUSE GOVERNMENT OPERATIONS COMMITTEE
SUBCOMMITTEE ON INFORMATION

Good Morning, Mr. Chairman and members of the Committee. I am Larry Diedrich, a soybean farmer from Elkton, South Dakota and President of the American Soybean Association (ASA). I am here today representing of the American Soybean Association and the National Corn Growers Association who support H.R. 1595, and who appreciate the Committee's interest in this legislation. We believe that the Federal government should be setting the standard for all printers by using vegetable ink for printing when it is cost effective. Since soy ink is the leading source of vegetable ink, we believe that the increased use of vegetable ink will result in increased use of our product.

The American Soybean Association has a strong and long term interest in the issue of using vegetable oil in ink. Soybean oil-based printing ink

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was developed by the Newspaper Association of America in 1985. Because of the volatility of petroleum prices during this period, the industry was looking for alternatives to the pigment vehicle for printing inks. After much testing of over 2000 different vegetable oil formulations, soybean oil was chosen as the most efficient and abundant source of vegetable oil. In fact, soybean oil exceed all of the National Newspaper Association's technical specifications. It was first tested by the Cedar Rapids Gazette in Cedar Rapids, Iowa in 1987. Since that time, soy ink has been widely used by major newspapers and other publishers across this country. We were pleased by USDA Secretary Espy's announcement last July at our annual meeting that the Department of Agriculture and its subcontractors will be using soy ink for all printing. USDA had been using soy ink for much for its printing for several years.

The American Soybean Association has recognized the significant product being made from their commodity and have devoted countless farmer dollars to the promotion and further development of this ink. In fact, in 1989 Monsanto Agriculture Company developed a SoySeal trademark to indicate the presence of soybean oil in various agriculture

products and assigned ASA the rights to the trademark. ASA has been very successful in promoting and expanding the market for soy ink by allowing the use of the SoySeal when the product is used in printing and manufacturing. The use of the trademark has allowed publishers and printers to know when they are using a soy ink product and readers to know when they are reading materials printed with soy ink.

The soybean industry established the National Soy Ink Information Center in Des Moines, Iowa, that serves as the coordinator of soy ink activities including research and market promotion. The Soy Ink Center has developed standards for the use of the seal by setting minimum requirements that are very close to the minimum levels set in your bill. These standards are reviewed periodically and can only be changed by approval of the ASA Board of Directors. The Executive Director of the Soy Ink Center will present testimony to the Committee later this morning.

I would now like to tell the committee some of the reasons ASA believes that a vegetable ink such as soy ink is the right direction our government should be going with its printing needs. Many of the qualities of soy

ink that we believe are beneficial to printers and readers are technical. For example, soy ink allows pigments to reach their fullest capability which is an important characteristic in the growing trend toward the use of color in newspapers. Because soy ink provides more intense color, printers can use less and it goes further. Another, very popular characteristic is "low rub." This factor is extremely important to readers who dislike the after effects of holding a newspaper printed with a conventional petroleum ink.

Soy ink has other favorable characteristics that are important to all citizens who have an interest in our environment. Unlike petroleum, soybeans are a renewable and plentiful source of oil. Although soy ink is not completely biodegradable because of pigments and other chemicals used in small quantities in the ink, it is friendlier to the environment than traditional inks. We believe that this is an important factor for the federal government to consider due to the large volumes of printed paper it uses and recycles daily.

Top researchers at Western Michigan University, recognized as the nation's premier education institution for paper manufacturing, have

found that soy ink is easier to remove from paper pulp before recycling. The paper does not have to be bleached as much, resulting in a cleaner paper at a lesser cost. This not only speeds up the recycling process and contributes to a better quality recycled paper as a result.

Another key factor in favor of soy inks is the absence of high volatile organic compounds (VOCs). In conventional inks, the petroleum evaporates and forms VOCs, however, soy ink does not release any significant volume of emissions into the air when it dries. Soy ink is well below the EPA range of limiting VOCs levels while petroleum-based inks are above the EPA limits.

Mr. Chairman, we are aware the U.S. Treasury Department has brought an issue to the Committee's attention regarding the use of vegetable inks on security documents, such as checks. We want the Committee to know that we have no problem with such documents being exempt from the requirements of the legislation.

Mr. Chairman, as a soybean farmer I am proud of the commodity that I grow because it can be used for so many different things, including

making a safer and cleaner ink. I hope that you and this Committee will look at the legislation closely and endorse its purpose of instructing federal agencies to use vegetable ink when it is available and cost effective. The federal government should be setting the standards for using environmentally safe and American produced products.

Thank you for your attention today. I will be happy to try to answer any questions that you or others might have.

Mr. CONDIT. Thank you, Mr. Diedrich. I appreciate you being here very much today. Ms. Patterson.

**STATEMENT OF JO PATTERSON, SOY INK COORDINATOR,
NATIONAL SOY INK INFORMATION CENTER, DES MOINES, IA**

Ms. PATTERSON. Good morning, Mr. Chairman, and members of the subcommittee. My name is Jo Patterson and I coordinate the promotional activities of soy ink on behalf of America's 400,000 soybean producers.

In February 1993, the National Soy Ink Information Center was established in west Des Moines, IA, when the Iowa Soybean Association, for which I work, was awarded a subcontract to manage the national soy ink program on behalf of the American Soybean Association.

The purpose of the National Soy Ink Information Center is to not only coordinate State and national activities, but to serve as an information source for the printing industry and the general public. It is in that capacity that I provide this testimony today.

Being a native Iowan, it is a special honor for me to appear today since Congressman Leach is one of the original cosponsors of the bill. U.S. soybean producers have a keen interest in passage of the Vegetable Ink Printing Act of 1993. They have invested millions of dollars in new uses research searching for ways to utilize the surplus of soybean oil that normally drives down the market prices of soybean.

Soy ink is a product that has come of age in the 7 short years since it was first introduced commercially. Thanks in part to the promotional activities funded by the national soybean checkoff and 26 State checkoff programs before that, soy ink is being used today by one-third to one-half of the Nation's 9,100 newspapers, including three-fourths of the 1,700 daily newspapers. In addition, one-fourth of the 50,000 commercial printers in the United States are using soy ink on a regular basis.

Likewise, nine States have soy ink legislation in place, including Arkansas, Illinois, Indiana, Iowa, Kentucky, Minnesota, Missouri, Ohio, and South Dakota. Several other States are pursuing some type of soy ink legislation.

In addition, an Executive order mandating the use of soy ink has been signed in Nebraska, and a directive signed by the Governor encouraging the use of soy ink is in place in South Carolina.

The U.S. Department of Agriculture broke new ground on the national level when Agriculture Secretary Espy announced last summer that the Department would do all of its printing, both in-house and contracted, with soy ink.

With the Vegetable Ink Printing Act of 1993, Congress has an opportunity to follow suit, showing its support for soybean farmers and new uses for ag commodities while, at the same time, helping the environment. Many Members of Congress already print their congressional newsletters with soy ink.

There are many reasons to print with soy ink, besides the obvious support for agriculture and the environment. Soy ink has become known for its quality of color, increased mileage, and improved overall printability. In fact, some ink manufacturers have

made soy ink their stock ink, meaning that unless the customer specifies petroleum ink, the order will be filled using soy ink.

Without a doubt, soy ink has enabled printers and print buyers to join the "Green Movement." With negligible or low emissions of pollution-causing vapors, known as volatile organic compounds, soy ink helps printers comply with the requirements of the Clean Air Act, which restricts VOC emissions in cities already suffering from air quality problems.

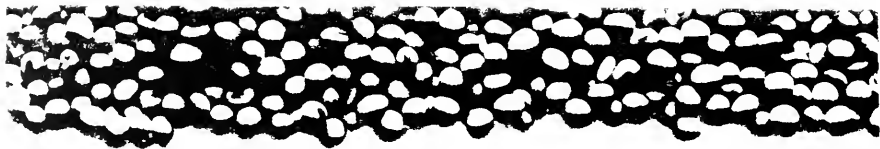
Soy ink also deinks faster and easier from recyclable paper, according to researchers at Western Michigan University, which Larry Diedrich just mentioned. That not only speeds up the recycling process, but it contributes to a better quality recycled paper as well.

Besides its appeal to the environmental community, soy ink also supports American agriculture. The use of soy ink draws upon our abundant supplies of soybean oil, a renewable resource.

It is estimated that 44 million pounds of soybean oil are currently used in ink production, but the potential could be as much as 457 million pounds if the entire printing industry switched to soy ink. Congress needs to follow suit with what USDA has already accomplished and begin printing all of its in-house and contracted materials with vegetable oil-based printing inks.

Mr. Chairman, I thank you for inviting me to speak today on behalf of America's 400,000 soybean producers.

[The prepared statement of Ms. Patterson follows:]



BEFORE THE
U.S. HOUSE SUBCOMMITTEE
ON
INFORMATION, JUSTICE, TRANSPORTATION, AND AGRICULTURE

Testimony on
H.R. 1595 - THE VEGETABLE INK PRINTING ACT OF 1993
May 26, 1994

by
Jo Patterson
Soy Ink Coordinator
National Soy Ink Information Center

National Soy Ink Information Center



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Good morning, Mr. Chairman and members of the Subcommittee. My name is Jo Pattersen, and I coordinate the promotional activities of soy ink on behalf of America's 400,000 soybean producers.

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Soy ink is a product that has "come of age" in the seven short years since it was first introduced commercially. Thanks, in part, to the promotional activities funded by the National Soybean Checkoff (and 26 state checkoff programs before that), soy ink is being used today by one-third to one-half of the nation's 9,100 newspapers, including three-fourths of the 1,700 U.S. daily newspapers.

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Congress needs to follow suit with what USDA has already accomplished and begin printing all of its in-house and contracted materials with vegetable oil-based printing inks.

Mr. Chairman, I thank you for inviting me to speak today on behalf of America's 400,000 soybean producers. I encourage you to move this bill forward in a timely manner for full House consideration.

Mr. CONDIT. Thank you, Ms. Patterson. We appreciate your being here. I have a couple questions. I would like to make one point real clear. Does anyone here anticipate any additional cost to the Federal Government for the use of vegetable ink?

Mr. DiMARIO. No, sir.

Mr. CONDIT. Mr. DiMario, the Department of Treasury has raised a concern that the use of vegetable ink may interfere with security measures for the government checks. Is this a reasonable concern and do you see any problem if the bill is amended to address it? Perhaps each of you can respond if you have information.

Mr. DiMARIO. I think it is a reasonable concern and we are also suggesting that as to our production of passports, that it might also apply.

The security measures that are adopted for those security documents are usually a coordinated effort to prevent counterfeiting and usually they bring in the counterfeit experts through the Treasury, but also with respect to passports you have the CIA and the FBI and a whole group of people and they establish what the security measures would be.

The best information to me is that it is a reasonable requirement and the escape clause as you have it proposed appears to be quite rational.

Mr. CONDIT. So you think we have dealt with the problem; have we taken care of it?

Mr. DiMARIO. Yes, sir.

Mr. CONDIT. All security measures will be protected?

Mr. DiMARIO. Yes, sir.

Mr. CONDIT. Any comments to that?

Mr. DIEDRICH. As I indicated, Mr. Chairman, in my testimony, we didn't have any problem with that whatsoever. I do understand there is technology that is very close that will resolve this concern within the veg oil ink market, so that is why I indicated it would be nice to be flexible with it so that it can be used in that particular use down the road.

Ms. PATTERSON. I would also like to comment that soy ink has only been on the market commercially for 7 years and it began in the newspaper industry. Technology is gaining ground every day. Soy ink has improved significantly since it was introduced, and I expect it will continue to improve even further.

Mr. CONDIT. Can anyone offer a realistic estimate of the market for vegetable ink? The estimates range up to 500 million pounds. Does anyone have a feel for that?

Ms. PATTERSON. We estimate soy ink usage from soybean oil could be as much as 44 million pounds.

Mr. CONDIT. Does anyone else have realistic numbers?

Mr. DiMARIO. No, sir.

Mr. CONDIT. Mr. Peterson, do you have any questions or comments?

Mr. PETERSON. No.

Mr. CONDIT. Mrs. Thurman.

Mrs. THURMAN. I just have one comment. I've got to say it. I have to tell you, Mr. Diedrich, when you mentioned the part about the black on your fingers, my mother told me that a long time ago when I was in a campaign, she said, "If you can figure out how to

get rid of this black ink that kind of rubs off everybody's hands, you could run for President."

Mr. DIEDRICH. Another good family reunion coming up.

Mr. CONDIT. Is there any research and development going on that would examine the use of vegetable ink? Is there any other ways in which we use vegetable ink? Is there any research in that area right now?

Mr. COLLINS. Yes, sir. The Department of Agriculture has never stopped so they are doing a lot of work on vegetable ink and soy ink, and it is an ongoing factor reported at the TAGA meeting, which is the Technical Association of Graphic Arts, earlier in the month about the work that was going on and will be going on.

Mr. CONDIT. Can you identify yourself please, sir?

Mr. COLLINS. I am George Collins. I'm the manager of both—

Mr. DiMARIO. I identified Mr. Collins in my statement as I opened the statement.

Mr. CONDIT. OK, we have no other questions. We appreciate your time. You have been very helpful to us. Our intention is to mark up a bill when we come back from the work recess and so we may be in contact with you if we have additional questions.

Thank you very much for your time.

Mr. DiMARIO. Thank you, Mr. Chairman.

Mr. CONDIT. I would like to ask that we have several Members who have provided statements to the committee. I would like to ask unanimous consent that they be included in the record.

Without objections, that will be done.

[The information is contained in the appendix.]

Mr. CONDIT. No other comments, questions?

[No response.]

Mr. CONDIT. This hearing is adjourned. Thank you very much.

[Whereupon, at 10:45 a.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

A P P E N D I X

MATERIAL SUBMITTED FOR THE HEARING RECORD

TESTIMONY BY CONGRESSMAN TIM JOHNSON ON H.R. 1595, THE VEGETABLE INK PRINTING ACT

BEFORE THE SUBCOMMITTEE ON INFORMATION, JUSTICE, TRANSPORTATION, AND AGRICULTURE

May 26, 1994

Mr. Chairman, I appreciate the opportunity to submit testimony on behalf of H.R. 1595, the Vegetable Printing Act. I strongly support this legislation, a similar version of which passed the Senate last year.

This legislation offers an important opportunity for this country to expand its markets for agricultural products, while placing no additional burden on our taxpayers. The bill calls for one simple step forward: all government lithographic printing be done with vegetable-based ink to the maximum extent technologically feasible and commercially cost-competitive. No objections to this proposal have been raised by any organization or one single member of the Senate. An official from the Government Printing Office has testified that there would no practical problems with implementing this proposal.

The importance of this potential market for our ag products should not be underestimated. The Department of Agriculture has already moved forward to implement the provisions of this bill, and that department alone will bring at least \$26 million of orders per year printed with vegetable ink.

Mr. Chairman, I stand with the members of the American Soybean Association, the National Corn Growers Association, the Corn Refiners Association, Communicating for Agriculture, the Consumer Federation of America, and a number of other ag organizations to support this bill. I am particularly proud that one of my constituents, Larry Diedrich of Elkton, South Dakota, is here today to testify on behalf of the American Soybean Association.

Mr. Chairman, thank you once again for the opportunity to submit this testimony, and I urge that the subcommittee move expeditiously on this legislation.

Testimony on H.R. 1595, the "Vegetable Ink Printing Act of 1993"
 Submitted by
 Representative James A. Leach
 to the
 Subcommittee on Information, Justice, Transportation and Agriculture
 May 26, 1994

Mr. Chairman, I appreciate the opportunity to submit testimony for consideration by your Subcommittee during its consideration of H.R. 1595, the "Vegetable Ink Printing Act of 1993." I am an original cosponsor of the bill and am convinced its passage makes both good economic and good environmental sense.

As you know, H.R. 1595 would require that all printing performed or procured by the Federal government use ink made from vegetable oil wherever doing so is technologically feasible and cost competitive.

The use of vegetable -- as opposed to petroleum-based -- newsprint inks by federal agencies will save the taxpayers money by making federal printing more environmentally sound, by using less foreign oil, and by increasing the utilization of renewable resources produced by our American farmers.

Vegetable ink not only is more environmentally friendly, but printers have found that vegetable ink provides better color reproduction, makes for easier press cleanup and is less susceptible to smearing. Moreover, vegetable ink saves money because it goes further; in fact, in certain print applications, 10 to 20 percent less vegetable ink is required to do the same job as petroleum-based ink.

On the environmental side of the ledger, vegetable ink has been found to be easier to remove from paper pulp prior to recycling, causing less damage to the pulp fibers during de-inking. This not only speeds up the process and makes recycling easier, but it contributes to better quality recycled paper. In addition, substantially less pollutants are released into the air by vegetable ink in the drying process.

Major newspapers using vegetable inks are: L.A. Times, Denver Post, Detroit Free Press, Milwaukee Journal-Sentinel, Boston Globe, Washington Times, St. Petersburg Times, and USA Today. In fact, over 3,000 U.S. newspapers use vegetable ink, including three fourths of all daily newspapers.

The expanded use of vegetable ink makes good sense for American agriculture as well.

If federal farm program payments are to come down without precipitating a depression in the heartland, it is crucial that new demand be developed for agricultural products. The use of vegetable ink to print Federal publications will contribute to the expansion of the manufacturing base for this ink. As soybean oil use as a base for ink expands, it is estimated that the demand could approach the 100 million bushel level, a significant addition to the market. Such expanded usage would contribute to the United States retaining or enlarging its share of the world market for newsprint ink.

The words of former Public Printer Robert W. Houk perhaps best sum up the arguments for the increased use of vegetable ink. According to Mr. Houk, "the use of soybean oil ink could help decrease our reliance on foreign oil that is used in the petroleum-based inks, reduce our stack emissions of pollutants, and help over half a million American farmers who currently grow soybeans."

Mr. Chairman, as you also know, under the leadership of Senators Bond and Wellstone, the other body has already passed legislation similar to H.R. 1595.

In conclusion, I would like to thank Jo Patterson of the Iowa Soybean who has worked tirelessly for the National Soy Ink Information Center on behalf of this important legislation, and I would like particularly to thank our colleague from Illinois, Mr. Durbin, for the leadership his has provided on this measure and on behalf of American agriculture as a whole.

Again, Mr. Chairman, you and your Subcommittee are to be commended for holding this hearing on H.R. 1595. I would urge swift and favorable action on the bill in order that it may be brought to the Floor for consideration as soon as practicable.

**Statement by the
Honorable Doug Bereuter**

House Government Operations
Subcommittee on Information, Justice, Transportation, and Agriculture
Vegetable Ink Printing Act
H.R. 1595

May 26, 1994

Mr. Chairman, as an original sponsor of H.R. 1595, I strongly support this legislation which seeks to expand the use of vegetable-based inks for Federal printing purposes.

The Vegetable Ink Printing Act, H.R. 1595, would require that Federal lithographic printing be performed using vegetable-based inks when technologically feasible and cost-competitive. Therefore, this legislation does not mandate the use of these inks but rather encourages Federal printers to utilize vegetable-based inks when appropriate.

Mr. Chairman, by promoting the use of vegetable-based inks for Federal printing purposes, this legislation will reduce our nation's dependence on foreign petroleum-based products, reduce volatile organic compounds emissions which are harmful to the environment, and increase the demand for our nation's renewable agricultural products.

The United States Department of Agriculture is already using vegetable-based inks for its printing purposes. According to Secretary Espy, approximately \$26 million in annual USDA printing will be performed with ink derived from agricultural products. Similarly, many newspapers including the nation's largest circulation newspaper, The Los Angeles Times, are major users

of one particular type of vegetable ink, soy ink.

Mr. Chairman, I strongly support this legislation which will, among other things, open the vast Federal printing market to vegetable-based inks. This initiative could potentially result in the demand for 2,500,000,000 pounds of vegetable crops or 500,000,000 pounds of vegetable oil in the U.S. printing market alone. It also helps to ensure that the United States will retain, or perhaps increase, its share of the world market for vegetable ink. Clearly, this legislation is good for our agricultural industry, and it is good for our environment.

I would like to commend my colleagues, Mr. Durbin, Mr. Leach, and Mr. Penny for their work on this legislation. Additionally, I urge my colleagues to support this legislation which is substantially similar to legislation, S. 716, passed last November in the Senate by unanimous consent.



STATEMENT OF
THE HONORABLE GLENN POSHARD
HOUSE GOVERNMENT OPERATIONS SUBCOMMITTEE
ON
INFORMATION, JUSTICE, TRANSPORTATION, AND AGRICULTURE
H. R. 1595
THE VEGETABLE PRINTING ACT

Thank you for the opportunity to offer my strong support for the Vegetable Printing Act, H.R. 1595. This legislation will set minimum percentages of vegetable oil that must be used by Federal agencies and government subcontractors in ink for lithographic printing. These percentages were established in discussions with Federal agencies and representatives from printing ink manufacturers. In addition, Ralph Nader's Government Purchasing Project and the American Soybean Association also support this legislation.

H.R. 1595 would allow a Federal agency to use less than the mandatory minimum percentages of vegetable oil if the cost of printing with vegetable-based ink is significantly greater than the cost of printing with petroleum-based ink. The Government Printing Office has advised that increasing the use of vegetable inks will have a negligible impact on the cost of its printing jobs. Vegetable ink provides greater printing mileage (more materials printed with less ink) which is a cost savings. In fact, in certain applications, 10%-20% less ink is required to do the same job as petroleum-based ink.

It is estimated that one-third of the country's more than 9,000 newspapers use vegetable ink, including the Los Angeles Times, Boston Globe, and USA Today. Magazines such as Time, Sports Illustrated, and People are beginning to use vegetable inks. Vegetable ink also has been found to produce better color reproduction, easier press cleanup, and less ruboff on readers' hands. Requiring the Federal government to use more vegetable-based ink in printing operations will send a strong signal to the marketplace. The signal is that the Federal government is willing to use its purchasing power to pursue goals that we all share: reducing government costs, helping the environment, and helping rural America.

As a member of Congress from a soybean-producing district, I know the importance of soybeans and soybean products for our domestic agricultural economy. If farm subsidies are to decrease without precipitating a depression in the heartland of America, it is critical that new demand be developed for agricultural products. While the increased use of vegetable-based inks will not alone save the family farmer, this step to requiring more uses for soybeans will be beneficial. All farmers are happy for any and all new markets for their production. Agriculture is a key component of our present and future renewable resource base.

Mr. Chairman and members of the Subcommittee, I believe, with this legislation, we can take a giant step forward to help rural America, the environment, and the U.S. taxpayers. Thank you for the opportunity to present my views. I urge your prompt consideration of H.R. 1595.

**BEFORE THE
HOUSE SUBCOMMITTEE
ON
INFORMATION, JUSTICE, TRANSPORTATION AND AGRICULTURE**

RE: H.R.1595 - THE "VEGETABLE INK PRINTING ACT OF 1993"

**STATEMENT OF
NATIONAL ASSOCIATION OF PRINTING INK MANUFACTURERS**

May 26, 1994

James H. Sutphin
Executive Director
Heights Plaza
777 Terrace Avenue
Hasbrouck Heights, New Jersey 07604
(201) 288-9454

NAPIM

NAPIM is a national trade association representing small, medium, and large printing ink manufacturers in the U.S. Its 80 members account for nearly 90% of total U.S. sales of printing inks which amounted to approximately \$3.1 billion in 1993.

The Printing Ink Industry is composed of 224 companies operating a total of 504 manufacturing facilities in the U.S. of which approximately 315 are operated by NAPIM members (U.S. Census of Manufacturers, 1987). Nearly two-thirds of the total number of printing ink manufacturing facilities in the U.S. employ fewer than 20 employees.

BACKGROUND

Vegetable drying oils have long been used in lithographic ink vehicles and continue to be used. More recently, semi-drying oils, especially soy oil, have come into favor as replacement for petroleum oils used heretofore, and are most widely used in newsinks as a result. Members of the printing ink industry have enthusiastically supported increased use of soy oils in their product lines.

The total usage of vegetable oils in lithographic inks for printing procured by or produced by the federal government probably did not reach 400,000 pounds in 1992, or about 0.002% of total vegetable oil supply. Soy oil probably represented more than half of this usage, accounting for less than 0.002% of total soy oil consumption in the U.S. The Vegetable Ink Printing Act of 1993 would increase the annual demand to about 1.2 million pounds of vegetable oils by 1997 and would represent a barely discernible increase in total vegetable oil demand. Even though soy oils would account for most of the increase, their total use in federal printing would not exceed 0.008% of soy oil supplies by that year.

In addition to the objective of increasing the demand for vegetable oils, NAPIM notes that sponsors of the bill have expressed the hope that the Act would reduce reliance on foreign oil and bring a reduction in volatile organic compounds (VOC) emissions. While such reductions may be accomplished, they would be so insignificant as to be almost meaningless. In fact, based on NAPIM's forecast, the projected reduction in petroleum oil demand would be only 0.00006%

of today's crude oil and product imports. By the same token, it is doubtful that H.R.1595 would result in an annual reduction of more than 140,000 pounds of VOC emissions within the next five years.

NAPIM POSITION

NAPIM appreciated the opportunity provided by Senator Wellstone's staff to make several changes in the draft language of the bill, S.716 to meet technical concerns. S.716 was passed by the Senate on November 18, 1993. As a result, NAPIM has less serious difficulty with the technical feasibility of the requirements of this particular bill, H.R.1595, which is almost identical to the language in S.716.

We have one important technical change to request in the final language of H.R.1595 and S.716. We would like to request that the 10% minimum for heat-set inks in §3(b)(2)(D) of H.R.1595 be changed to 7% in the final legislation adopted by the Congress.

The American Soybean Association has recognized the need for the change to a 7% level for heat-set inks after discussing it with printing ink manufacturers. The Soybean Association has established a minimum of 7% of total formula weight for heat-set ink in order to qualify for use of the logo and soyseal trademark program.

This is important to NAPIM because one-half of all lithographic inks are heat-set inks and coated paper requires the use of heat-set inks.

Nevertheless, members of the printing ink industry do have serious philosophical concerns about the encroachment of the Congress into technical aspects of industrial manufacturing where health and safety issues are not involved and where there would be only minimal environmental benefit, if any. This is especially true in this particular case since the bill will have no significant impact on vegetable oil demand, nor will it result in any significant improvement in the environment.

NAPIM also questions the fairness of legislation which appears to be designed to create a market for a specific group of constituents at the possible expense of other sectors of the economy.

The unnecessary encroachment into technical aspects of industrial manufacturing is of

particular concern to members of the printing ink industry because day-to-day formulation of proprietary products is necessary to meet specific printing requirements for a wide variety of printing conditions and uses. The formulation of printing inks involves a sophisticated blend of scientific and empirical knowledge to produce a product to be applied at press speeds as high as 2,000 feet per minute and which must dry instantaneously. The applied ink film with a thickness of about one-fortieth the thickness of a human hair must withstand rubbing and folding; must adhere to the surface being printed; must often resist exposure to chemicals, and have a variety of other physical and chemical performance properties to satisfy the requirements of a multitude of different end uses. NAPIM submits that the unrealistic and unnecessary formulary constraints which would be introduced by the Act will do little more than reduce performance and discourage technological advances.

NAPIM would also like to point out to the Committee that the printing ink industry is already using large quantities of vegetable oils in applications where they are appropriate and which do not detract from the performance properties of the printing ink. NAPIM further notes that as formulary knowledge increases, the use of semi-drying oils such as soy oil will continue to increase in the future. In view of the progress already made, NAPIM believes that it is unlikely that the Vegetable Ink Printing Act of 1993 would have any additional effect on vegetable oil demand. It will, however, place unnecessary constraints on the ability of printing ink suppliers to produce the best possible printing ink products.

ADDITIONAL BACKGROUND

Attached as Exhibit I is an excerpt from a report prepared at the request of the NAPIM Board of Directors on the effect of the Vegetable Ink Printing Act on the potential market for vegetable oils. It presents data on estimated consumption of vegetable oils in lithographic inks and evaluates the minimal effect which S.716 will have on vegetable oil demand and on the environment.

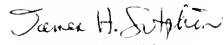
NAPIM would also like to point out to the Committee that the printing ink industry is already using large quantities of vegetable oils. It presents data on estimated consumption of vegetable oil demand and on the environment.

CONCLUSION

For the foregoing reasons, the National Association of Printing Ink Manufacturers, on behalf of the U.S. Printing Ink Industry, opposes the passage of the Vegetable Ink Printing Act of 1993.

Thank you for this opportunity to comment.

Respectfully submitted,



James H. Sutphin
Executive Director

May 26, 1994

**THE EFFECT OF THE VEGETABLE INK PRINTING ACT
ON THE
POTENTIAL MARKET FOR VEGETABLE OILS**

May 1993

*** * ***

**The National Association of Printing Ink Manufacturers
777 Terrace Avenue
Hasbrouck Heights, NJ 07604**

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**THE EFFECT OF THE VEGETABLE INK PRINTING ACT
ON THE POTENTIAL MARKET FOR VEGETABLE OILS**

EXECUTIVE SUMMARY

1. There has been a growing interest in Congress to achieve a greater use of vegetable oils in printing inks. While bills introduced in the 102nd Congress were not enacted, Senators Bond, Wellstone, Grassley and others recently introduced the Vegetable Ink Printing Act of 1993 (S.716) which will require the use of specific minimum levels of vegetable oils in lithographic inks used by the Federal government for in-house and contract printing. A companion bill (H.R.1595) has also been introduced in the House by Representatives Durbin, Leach, Penny and Boreuter.
2. Because of some misconceptions concerning the potential impact of vegetable oil inks on the environment and their potential to increase vegetable oil demand while reducing petroleum oil usage, NAPIM has prepared the following monograph to put these issues into proper perspective.
3. Vegetable drying oils such as linseed, tung, oticica and other oils have long been used in lithographic ink vehicles. More recently semi-drying oils, especially soy oil, have come into favor. They are generally used as replacements for petroleum oils used heretofore and are most widely used in lithographic newsinks.
4. Members of the printing ink industry have enthusiastically supported an increased use of soy and similar semi-drying oils and most manufacturers of lithographic inks offer soy or other vegetable oil inks in their product line.
5. While NAPIM has no quarrel with reasonable legislation encouraging the use of vegetable oil inks in appropriate end uses, the NAPIM Board of Directors is concerned that legislation specifying required minimums such as the Vegetable Ink Printing Act of 1993 would encroach on technical formulary freedom where environmental or other health and safety issues are not involved.
6. Present use of vegetable oils in printing inks reached about 70 million pounds in 1992 representing a market for only 0.4% of total U.S. vegetable oil supplies. Thirty million pounds of this total were soy oils accounting for 0.25% of the total soy oil consumption in the U.S.
7. Vegetable oils used in lithographic inks for federal government printing probably did not reach 400,000 pounds in 1992, or 0.002% of total vegetable oil supply. Soy oil probably represented more than half of this usage accounting for less than 0.002% of total soy oil consumption in the U.S. If enacted, the Vegetable Ink Printing Act of 1993 could create a demand for only 1.2 million pounds of soy oil by 1997 and would represent a barely discernable increase in total demand for soy oil.

8. Sponsors of S.716 have also expressed the hope that the Act would decrease reliance on foreign oil. The projected use of vegetable oil inks resulting from the Act would result in a reduction in petroleum oil usage of around 1.2 million pounds. This is only 0.00006% of today's imports of crude oil and petroleum products.
9. Although greater use of vegetable oils in printing ink would bring a corresponding reduction in VOC content, these reductions will not be as great as some observers seem to expect. Even though today's usage of soy oils has replaced upwards of 30 million pounds of petroleum oil, total reduction in VOC emissions is probably less than 3.5 million pounds. The reason for this is that most of the conventional inks which have been replaced by soy were dried without the application of heat and consequently only a small portion of the VOC content would have been emitted to the atmosphere. Thus, by 1997 it is doubtful that S.716 could result in a reduction of more than 140,000 pounds of VOC emissions.
10. The NAPIM Board of Directors, and most members of the printing ink industry, believe that legislation to encourage increased use of vegetable oil is not necessary to ensure a growth in the market for vegetable oil inks. Intense promotion of soy oil inks by the American Soybean Association combined with external market forces will inevitably bring a substantial increase in the use of soy ink by newspaper and commercial printers and will not be significantly increased by legislation requiring their use for either federal or state contract printing.

THE EFFECT OF THE VEGETABLE INK PRINTING ACT ON THE POTENTIAL MARKET FOR VEGETABLE OILS

INTRODUCTION

There has been a growing interest in Congress to achieve a greater use of vegetable oils in printing inks. Bills were introduced in the last Congress, but none were enacted. Now, in the 103rd Congress there have been renewed efforts to legislate increased use of soy and other vegetable oils in printing inks.

The concern of many legislators with the use of vegetable oils in printing ink reflects their belief that such inks will reduce environmental pollution. While this concern is, no doubt, sincere, it may also reflect a misunderstanding about the extent to which vegetable oil inks can be expected to reduce pollution. The printing ink industry has diligently worked to reduce the volatile organic compound (VOC) content of their products and, as a result, have made substantial reductions over the years. This reduction has been achieved by a variety of means and when feasible the approach has included the use of vegetable oils.

Consequently, it appears that much of the proposed legislation goes beyond reasonable efforts to achieve a clean environment. Instead, it appears that the some legislation may be an effort to create new markets for constituents' products rather than to deal with a substantial risk to health or the environment.

On April 1, 1993 Senators Wellstone, Bond, Grassley and others introduced a bill to increase the use of vegetable oils in federal government printing, known as the Vegetable Ink Printing Act of 1993 (S.716). This bill would encroach on the technical formulary aspects of the printing ink industry in order to achieve a minuscule increase in the total market for vegetable oils. In view of the misconception that the use of vegetable oils in printing inks would have a significant favorable impact on the environment while substantially increasing the total U.S. market for vegetable oils, NAPIM has prepared this brief monograph to put the issue into proper perspective.

DISCUSSION - VEGETABLE OIL USAGE

Vegetable Oils in Printing Ink

Vegetable oils such as linseed, tung, oticica and similar drying oils have long been used as ingredients in printing ink vehicles. In fact, linseed oil was the vehicle used in inks in the days of Benjamin Franklin and other early printers in the Colonies and linseed oil varnishes were virtually the only ink vehicles available until the early 1900's. Vegetable oils such as soy, canola, cottonseed or corn oils are semi-drying oils which cannot always be substituted for linseed or other drying oils.

In the last few years there has been a great deal of awareness of inks made with soy oils, principally because of the intense promotion by the American Soybean Association (ASA) combined with the exaggerated belief that soy inks are somehow significantly more environmentally friendly than conventional inks. While soy oils do offer advantages in some ink formulations, they also have deficiencies. (See NAPIM monograph, "A Realistic Appraisal of Soya Inks.") As a result, most paste ink manufacturers today have soy inks in their product line, although there are probably none who offer soy inks exclusively.

Production of Vegetable Oil Inks

For purposes of this discussion it is necessary to differentiate between conventional lithographic inks and so-called "vegetable oil inks." Conventional inks typically use vehicles containing linseed or other vegetable drying oils along with petroleum oils as "solvents" in the vehicle. Vegetable oil inks use semi-drying oils to replace most or all of the petroleum oils in the formulation. In the U.S. virtually all of the semi-drying oil used in vegetable oil inks is soy oil, although corn, canola, tall or other semi-drying oils may also be used.

NAPIM is not aware of any recognized consultant or other authoritative source that has published information on the use of semi-drying vegetable oils in printing ink. Certainly soy oil is widely used in colored newsinks and in a wide variety of sheet offset (lithographic) ink products. It is less often used in black newsinks, partly because of dispersion problems and partly because of cost. Soy oil is even less widely used in heatset offset ink systems, although heatset inks with low levels of soy oil are now becoming available.

By drawing on estimates from informed ink industry sources and limited information available to NAPIM from consultants, NAPIM has attempted to arrive at a reasonable estimate of the share of market accounted for by soy vegetable oil inks in 1992. Since the use in the U.S. of other semi-drying oils other than soy is extremely limited, these estimates of soy ink's market share are reasonably representative of total vegetable oil ink production. These estimates of market penetration have been applied to ink shipments data from NAPIM's Quarterly Sales Report which measures ink shipments in the U.S. by broad ink categories.

TABLE I

ESTIMATED SHIPMENTS OF SOY LITHOGRAPHIC INKS - 1992

Lithographic Inks	<u>Million Pounds</u>	
	<u>Total Ink</u>	<u>Soy Inks</u>
Newsink	328	69
Heatset Web Offset	423	25
Sheet Fed Offset	127	31
Total	<u>878</u>	<u>125</u>

While the foregoing figures may not be completely accurate, NAPIM believes that they reflect probable orders of magnitude. Moreover, NAPIM's estimate of 125 million pounds of vegetable oil inks in 1992 is reasonably consistent with estimates from other unpublished sources. Estimates from these other sources range between 70 million and 150 million pounds for current usage. The 70 million pound estimate is probably understated, but it is doubtful that consumption of vegetable oil inks reached 150 million pounds in the U.S. in 1992.

Vegetable Oil Consumption

Because of the variety of different ink systems and color formulations in use today, it is difficult to cite one specific percentage of soy or similar semi-drying oil which might be used in each major type of vegetable oil lithographic ink. Nevertheless, it is possible to arrive at a representative average oil content. By applying these average contents to total shipments of soy inks, NAPIM estimates that total consumption of soy oils for printing ink was approximately 30 million pounds in 1992.

In addition to the semi-drying oils used in vegetable oil inks, linseed oil is the primary vegetable oil used in conventional inks. Estimates of the total quantity of linseed oil used in ink were obtained from the major crushers and marketers of this product to the printing ink industry. The consensus of these estimates places total consumption of linseed oil for lithographic ink in 1992 at approximately 40 million pounds. Thus, the combined consumption of soy and linseed oils used in lithographic inks was about 70 million pounds in 1992. Since soy oil accounts for nearly all of the semi-drying oils used in ink, and linseed accounts for most of the drying oils used, these two vegetable oils together account for virtually all vegetable oils used in printing inks today.

TABLE II

Estimated Consumption of Vegetable Oils in Lithographic Ink - 1992

<u>Lithographic Inks</u>	<u>Million Pounds</u>		
	<u>Soy Oil</u>	<u>Linseed Oil</u>	<u>Total Oil</u>
Newsink	21+	-	21+
Heatset Web Offset	2½	28	30.5
Sheet Fed Offset	6+	12	18+
Total	<u>30</u>	<u>40</u>	<u>70</u>

Vegetable Oils Used in Ink for Federal Printing

In his sponsoring statement for S.716, Senator Wellstone has estimated that the federal government "currently utilizes about 1,400 tons of ink for its in-house and contract printing operations"¹. NAPIM knows of no other data on the proportion of total U.S. lithographic ink shipments used for federal government printing. However, in the absence of any factual basis to arrive at an accurate estimate, NAPIM believes that inks for federal printing do not exceed 0.5% of total U.S. lithographic ink consumption. This suggests a figure of somewhere between 2.8 million pounds (1,400 tons) and 4.5 million pounds of lithographic ink.

On the basis of the proportion of soy oils used today in all lithographic inks, it seems reasonable to conclude that the soy oil content of inks used for federal printing was somewhere around 100,000 to 200,000 pounds in 1992.

Total Vegetable Oil Supplies

According to the U.S. Department of Agriculture, the total domestic supply of vegetable oils in the U.S. in the 1991-92 crop year was 16.2 billion pounds, of which soy oils accounted for 12.2 billion pounds. By comparison, total domestic consumption of linseed oil crushed in the U.S. was only 170 million pounds in the 1991-1992 crop year. At least two-thirds of the seed from which this was made is imported from Canada with the balance grown principally in South Dakota and Minnesota.

Total domestic supplies of vegetable oils as reported by the U.S. Department of Agriculture are shown in Appendix A. These data have been arrayed according to whether they are drying, semi-drying or non-drying oils in Table III, below, and compared with estimated usage in printing ink.

Obviously, except for linseed oil and other drying oils, the current consumption of vegetable oils in printing ink is insignificant when compared with the total supply of these oils. Only in the case of linseed and miscellaneous drying oils does printing ink represent an important market, accounting for 20% of linseed oil supplies. On the other hand, printing ink accounts for only 0.25% of soy oil consumption today and only 0.4% of total domestic consumption of vegetable oils.

TABLE III

**U.S. SUPPLIES OF VEGETABLE OILS VERSUS CONSUMPTION IN
LITHOGRAPHIC INKS**

	Million Pounds		
	Total Supply	Used In Inks	%
<u>Drying Oils</u>			
Linseed	170	40	24.0
Other	30	1	3.0
Total	200	41	20.0
<u>Semi-Drying Oils</u>			
Soy	12,245	30	0.25
Corn	1,201	-	-
Cottonseed	1,075	-	-
Canola	801	+	-
Other	414		-
Total	15,736	30+	0.2
<u>Non-Drying</u>			
Peanut	179	-	-
All Other	70	-	-
	249	-	-
Total	<u>16,185</u>	<u>71+</u>	<u>0.4</u>

DISCUSSION - SIGNIFICANCE OF THE VEGETABLE INK PRINTING ACT OF 1993

Market Implications

Both Senator Bond and Senator Wellstone have noted that an important objective S.716 is to increase the market for soy and other vegetable oils. Senator Wellstone has stated that, "this is precisely the type of legislation that can link promotion of rural America's economy with protection of the environment....The federal government must realize its potential as a positive force in the market place - encouraging desirable new products and technologies by creating a new market for them."² Senator Bond commented that the bill would, "help the millions of American farmers who currently grow agricultural products."³

As shown in the preceding sections of this report, total consumption of vegetable oils in lithographic ink accounted for only 0.4% of total U.S. domestic supply of vegetable oils in 1992. The quantity of oils consumed in lithographic inks by the federal government for in-house and contract printing was substantially smaller and probably did not exceed 400,000 pounds in 1992. This is only 0.002% of the total domestic supply of vegetable oils.

The Vegetable Ink Printing Act of 1993 would require the use of vegetable oils at, or above, specified minimal levels in lithographic inks used for federal printing. If all such inks had contained the specified levels in 1992, they would have consumed slightly less than one million pounds of vegetable oil. This is only 0.006% of the total vegetable oil supply. Assuming a three percent per year growth in government ink consumption and a reasonably steady supply of vegetable oils, the bill would create a potential demand for only 1.2 million pounds by 1997. This would be less than 0.01% of total vegetable oil supplies.

As suggested by Senator Wellstone², the sponsors of the bill hope that this type of legislation will encourage increased use of vegetable oils, especially soy oil for lithographic inks used in commercial markets in the future. NAPIM is confident that the promotion by the American Soybean Association, combined with other external market forces, will bring an increase in the use of soy ink in any case, and that such growth will not be significantly affected by the bills currently before Congress. In view of this outlook, the bills' minimal potential effect on vegetable oil markets should be considered.

Senator Bond has also expressed the hope that this legislation, "would help to decrease reliance on foreign oil that is used in the petroleum based inks."⁴ While it must be acknowledged that any trend that produces the nation's reliance on oil imports would be advantageous, it must be noted that the effect of greater use of vegetable oils in federal government printing would be so insignificant to be almost meaningless. Since current crude oil and product imports were 1.96 trillion pounds in 1992,⁵ a total savings resulting from the use of vegetable oils for federal printing would represent a miniscule 0.00006% of foreign imports.

Environmental Implications

Both principal sponsors of S.716 have noted two potential environmental advantages attributed to soy and other vegetable oil inks. One of these is the claim that such inks are more easily recyclable than petroleum based inks since the deinking process is easier and cheaper. The other claimed advantage is that vegetable oil inks may result in lower emissions of volatile organic compounds (VOCs).

Whether or not soy based inks enhance the recycling process as compared to lithographic inks containing petroleum oils is still open to question. The U.S. Department of Agriculture at Peoria, Illinois has done some work suggesting some recycling advantage for newspapers, but other references in the technical literature are still mixed and some of the most recent work of USDA has been questioned. In fact, there is considerably less evidence of any recycling advantage in the case of paper printed by sheet fed or heatset lithography. Thus, based on references in the technical literature, NAPIM is neither able to agree nor disagree with the assertion that soy inks are more readily deinkable.

An evaluation of the importance of VOC content in printing ink requires an understanding of the drying mechanism of different types of lithographic inks. Newsinks, forms inks and sheet fed offset inks dry without the use of heat so that only a small portion of the VOC content is actually emitted. EPA, in its latest draft of its Control Technique Guideline (CTG)⁶ for lithographic printing assumes that in the case of inks which dry without the use of heat 95% of the VOC contained in the ink vehicle is retained in the printed ink film and only 5% of the VOCs in such inks would be expected to be emitted. In the case of heatset web offset inks, EPA's CTG considers that 20% of the VOCs are retained while 80% are emitted. However, practically none of this 80% emission is actually emitted to the atmosphere since EPA clean air rules require emissions to be controlled with modern control equipment such as incinerators or other control devices.

Consequently, the replacement of 30 million pounds of VOCs through the use of soy inks in 1992 resulted in an actual reduction of VOC emitted to the atmosphere of less than 3.5 million pounds, of which more than half was controlled through incineration of the emitted gas.

NAPIM agrees that every reduction in VOC emissions represents a move towards a cleaner environment and use of vegetable oil can certainly assist in this respect. On the other hand, the true potential reduction of VOC emissions which would result from the increased use of vegetable oil inks has been exaggerated in many of the articles which have appeared in the trade and consumer press in the last few years. Meanwhile, it should not be overlooked that there will undoubtedly also be other advances in printing ink technology which will result in further reductions in VOC content of ink, just as there have been in the past.

Footnotes

¹Congressional Record, 4/1/92, pg. S4280

²Congressional Record; 4/1/93; pg. S4280

³Congressional Record, 4/1/93, pg. S4279

⁴Congressional Record, 4/1/93; pg. S4279

⁵Total U.S. Imports of Crude and Product, 1992, America Petroleum Institute.

⁶Control Techniques Guideline For Offset Lithographic Printing, U.S. Environmental Protection Agency; 12/14/92.

APPENDIX A**U.S. OIL CROP PRODUCTION & DOMESTIC CONSUMPTION**
CROP YEAR (10/1/91 - 9/30/92)

<u>Type of Oil</u>	<u>Million Pounds</u>		
	<u>Production</u>	<u>Consumption</u>	<u>Export/Import</u>
Soy	14,345	12,245	2,100
Corn	1,821	1,201	620
Cottonseed	1,279	1,075	204
Sunflower	911	396	515
Peanut	356	179	177
Linseed ⁽¹⁾	182	170	12
Sufflower	69	18	51
Canola ⁽²⁾	32	801	(769)
Misc. (Mostly Imported) ⁽³⁾	-	100	(100)
Total	<u>18,995</u>	<u>16,185</u>	<u>2,810</u>

Notes

- (1) About 2/3 of seed for linseed oil is imported from Canada
- (2) Imported from Canada
- (3) Imports include tung, oticica and others. Total shown is an estimate of approximate total imports.



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Statement of Bruce Abbe
Vice President of Public Affairs
Communicating for Agriculture

Submitted to the
U.S. House of Representatives
Government Operations Committee
Subcommittee on Information, Justice, Transportation and Agriculture

Hearing on H.R. 1595
Vegetable Ink Printing Act

May 26, 1994
Washington, DC



Chairman Condit, members of the committee, I thank you for the opportunity to submit a statement for the record on behalf of the members of Communicating for Agriculture in support of H.R. 1595, the Vegetable Ink Printing Act. The bill would require the federal government to use as much vegetable oil ink in printing purchases as is technically feasible, without significantly increasing the cost compared to petroleum-based inks.

My name is Bruce Abbe. I am vice president of public affairs for Communicating for Agriculture (CA). CA is a non-profit, non-partisan rural association that includes farmers, ranchers and their family members and rural agribusinesses in 48 states. Our testimony is similar to a statement submitted last year in support of companion legislation, now approved by the U.S. Senate.

President Clinton and many other political leaders from both political parties are right when they say we must work to achieve economic growth at the same time we work to improve our environment. Public policy questions on these issues should not, and need not, always come down to sacrificing either jobs for the environment, or the environment to protect jobs. There are tough choices that need to be made when it comes to protecting the environment. But there are also many instances where the right decision for the environment -- be it a purchase decision or a new regulation -- can be positive for economic growth.

Perhaps the best example is the emerging field of new renewable resource products for industrial and non-food consumer uses made from agricultural materials. A shift to renewable resource materials from non-renewable materials is one of the key challenges, and best opportunities, we have in achieving a sustainable, protected world environment.

A growing number of forward-thinking organizations and individuals involved in agriculture, environment, manufacturing, and rural development believe the time has come for the United States to formulate a national renewable resource development policy. Such a policy would involve a wide range of initiatives and coordinate programs among several federal agencies covering such areas as research and development, commercialization and technology assistance to new businesses, product and environmental standards, farm program rules and procedures, rural development policies, international trade policies, and government purchasing policies. We think there is much merit to this idea.

One of the earliest and most successful examples of these “new uses” renewable resource products from agriculture is “soy inks”. In a few short years since its first research and development at the U.S. Department of Agriculture’s Agricultural Research Service labs, through its introduction in the marketplace and commercial production, soy ink has now become widely accepted and used throughout the printing industry across the country. Other vegetable sources, including corn oil, also are now being used in printing inks.

As a renewable resource, vegetable oil inks can be manufactured from crops American farmers produce in surplus each year. The environmental advantages of vegetable oil inks also extend to recycling. Paper printed with vegetable oil inks is more easily recycled than that printed with petroleum ink, because the de-inking process is easier, cleaner and more cost efficient.

Government regulations giving preference to certain types of products can be impractical if not carried out properly -- notably if those preferred products are not readily available, or if they are not of adequate quality. That is clearly not the case when it comes to vegetable printing inks.

Vegetable inks are now used throughout the printing industry. State governments and local public agencies, as well as many private sector businesses, are now requiring the use of soy or vegetable inks in their printing purchases. Most any commercial printer now has soy or vegetable inks available.

Communicating for Agriculture has used soy inks in all of its publications for many years, and we have found them to be of superior quality.

This bill sets clear standards for the amount of vegetable oil content in various categories of printing inks, that have been developed in consultation with the National Association of Printing Ink Manufacturers. The Government Printing Office has indicated negligible impact on the cost of printing, nor does it anticipate problems meeting those standards. And there are provisions in the bill that would set procedures for federal officials to follow to reduce the vegetable ink content required if the cost of those inks were to become significantly greater than petroleum-based inks.

In summary, we believe the Vegetable Ink Printing Act is a good piece of legislation, that has been well-developed with input from the appropriate industries. It is “do-able”, and is good policy.

Thank you.



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